APPROVED BY TRANSPORTATION COMMISSION ON JANUARY 17, 2019

APPROVED
SUMMARIZED MINUTES

CITY OF SCOTTSDALE
TRANSPORTATION COMMISSION
REGULAR MEETING

Thursday, November 15, 2018

KIVA – CITY HALL
3939 N. DRINKWATER BOULEVARD
SCOTTSDALE, AZ 85251

1. CALL TO ORDER

Chair called the regular meeting of the Scottsdale Transportation Commission to order at 5:17 p.m.

2. ROLL CALL

PRESENT: Barry Graham, Chair
Don Anderson
George Ertel
Renee Higgs
Michael Kuzel
B. Kent Lall

ABSENT: Pamela Iacovo, Vice Chair

STAFF: Paul Basha, Transportation Director
Phil Kercher, Traffic Engineering Manager
Sam Taylor, Traffic Engineering Analyst

3. PUBLIC COMMENT

Chair invited public comments. There were none.

4. APPROVAL OF MINUTES

Chair called for comments or changes. Two Commissioners made grammatical corrections.

- Regular Meeting of the Transportation Commission – October 18, 2018

COMMISSIONER ANDERSON MOVED TO APPROVE THE REGULAR MEETING MINUTES OF THE TRANSPORTATION COMMISSION ON OCTOBER 18, 2018 AS AMENDED. COMMISSIONER ERTEL SECONDED THE MOTION, WHICH CARRIED 6-0 WITH CHAIR GRAHAM, COMMISSIONERS ANDERSON, ERTEL, HIGGS, KUZEL AND LALL VOTING IN THE AFFIRMATIVE WITH NO DISSENTING VOTES.

5. TRANSPORTATION HISTORY OF SCOTTSDALE AND EAST PHOENIX

Paul Basha, Transportation Director, began by discussing the freeway system.

In the 1960s:

In the 1960s, the freeway did not extend to Pima Road or beyond Pima Road. What is now the 101 Freeway was called the Indian Bend Freeway, essentially following the Indian Bend Wash from Scottsdale Road to Bell Road. There was an east/west freeway called the Paradise (Camelback Road Alignment). There were two different freeways where there now is just one. These include the Papago Freeway (essentially the 202 now) and the Maricopa Freeway (I-10, south of the Papago Freeway). At one time, there were three east/west freeways west of the Black Canyon (I-17) Freeway. Currently there is one.

In the 1980s:

The Paradise still existed on Camelback Road. The freeway that was on Scottsdale through Indian Bend Wash was moved to Pima Road. The Pima Freeway curved and became what is known as Frank Lloyd Wright between Scottsdale and Pima and then was on Bell Road west of Scottsdale Road. In the late 1980s, the Freeway changed and Pima Freeway continued farther north. Initially, there were two different alignments for the 202, neither of which were where the 202 is now. The intention from ADOT and City of Phoenix was that the Papago Freeway would be on McDowell Road and not adjacent to what is now Tempe Town Lake. An alternative was on McKellips Road, one mile south of McDowell. In 1984-1985, a Scottsdale Councilperson made the statement, “There will never be a freeway in Scottsdale.” That is why the 202 curves to the south. The dominant reason that there are not two east/west freeways was due to community opposition. The feeling in the 1970s and 1980s in Phoenix was that having freeways would make the region become like Los Angeles. If no freeways were built, there would be no growth and no metropolitan area littered with freeways. ADOT is beginning design of an I-10 reliever in the West Valley, that is basically along the alignment of the initial I-10 just to the west of Black Canyon. It will be a much more expensive freeway now than it would have been in the 1980s and 1990s.

Mr. Basha’s professional opinion is that freeways are 1950s and 1960s technologies, which the Valley did not implement until the 1980s and 1990s. He would rather they had not built all the freeways. Commissioner sought Mr. Basha’s opinion on what he would have suggested rather than freeways. Mr. Basha suggested light rail.

Commissioner stated his understanding that City Council has resolved that they cannot even bring the light rail to discussion at a Council meeting. Mr. Basha stated that in 2015, the Transportation Commission developed Transportation Master Plan in association with the Transportation Department. This was a 14-month process. In July of 2016, the Transportation

Commission recommendation was presented to City Council. It included three possible light rail routes in the City of Scottsdale for implementation in the year 2035. The City Council voted to remove those discussions in the Transportation Master Plan prior to their adoption of the Transportation Master Plan. In addition, a phrase was inserted that the City of Scottsdale would consider all modes of transportation other than rail and modern streetcar.

Commissioner questioned when rail was invented and what technology is that? Mr. Basha noted did not know but noted possibly in 1850's, believes we had rail during the civil war, Commissioner stated rail is 100-years older than freeways. Commissioner commented that light rail today is very different from the old streetcar.

Chair referred to the southward bend on the 202. He noted the inconvenience of a driver going east who wants to go to the North Scottsdale, but who must first go south. He questioned whether it was a good decision to move it out of Scottsdale. Mr. Basha said having lived in Scottsdale, it was a very good decision. It is better that there is no freeway through the heart of the City south of Downtown.

Mr. Basha continued with the history, discussing the freeway at the Central Arizona Project Canal. At one time, the freeway came to Frank Lloyd Wright along Bell Road. In the 1980s, the freeway was changed to be on Pima Road. The Hayden Road intersection of Frank Lloyd Wright is too close to the Pima Freeway. At one point, all that existed in the area were the remnants of the Verde Canal. By 1969, there was the Central Arizona Project Canal, but no Frank Lloyd Wright Boulevard and no Bell Road. There was no change in Scottsdale Airport/Airpark from 1969 to 1979. Planning for the freeway occurred in the early 1980s along Frank Lloyd Wright Boulevard, which became Bell Road. In the late 1980s, the City planned Hayden Road to connect with Pima Road. When ADOT changed the freeway alignment to Union Hills farther north, there was still Hayden Road as through Pima Road was going to curve. The Pima-Princess 101 Interchange would have been at Hayden Road and Pima Road just south of the Canal.

Hayden Road intersecting with Frank Lloyd Wright is fine, although it is close to the Pima-Frank Lloyd Wright intersection. They are both just two ordinary intersections. In the late 1980s, this part of the City was vacant, undeveloped desert. The property owners created an improvement district to construct infrastructure in the area. The improvement district asked the City to build a street system, water and sewer systems, drainage systems and to assess the property owners to pay for the design and construction. Mr. Basha was a traffic engineer at the time. His supervisor came to him with the plans to construct Hayden Road. It was evident that the intersection came close to where State Route 101 and the Frank Lloyd Wright interchange will be located. They asked Mr. Basha whether they should change the plans. Mr. Basha advised at the time that a realignment was not necessary. Mr. Basha felt that Hayden Road would become part of the interchange.

<u>In the 1990s and on</u>:

In 1997, Pima Road still existed and the freeway did not yet exist. As time passed, the freeway was constructed with interchange separate from Hayden Road. As such, there are three major intersecting streets, including the two ramps for the 101 within approximately 1,000 feet. It is difficult to coordinate and operate. The main reason the interchange exists as it does, as opposed to what Mr. Basha thought would occur, is due to money. The property owner told ADOT they would sell the land for the interchange at a much reduced price only if ADOT would leave the Hayden-Frank Lloyd intersection as it was and not connect an interchange to the

intersection. The eventually constructed alignment represented a savings of tens of millions of dollars as opposed to an alternate alignment.

In 2004, there was an idea to curve Hayden Road to Frank Lloyd Wright Boulevard, however the decision was made that it would be too expensive to purchase a building on the property to provide the connection. In 2013, the Transportation Department developed a favorable concept of constructing a roundabout at the Hayden-Northsight intersection. The dominant purpose was to take left turning traffic out of the Hayden-Frank Lloyd Wright intersection and locate it at Hayden Northsight. A roundabout is more efficient than a primitive traffic signal. A roundabout made the left turn easy and made the intersection and interchange much less congested. George Williams was responsible for the concept. Traffic flow is dramatically improved in the area with traffic times decreased significantly.

Commissioner referred to intersections in the presentation and said it would be helpful to provide grades for intersections in terms of levels of service. Mr. Basha said it has been approximately ten years since he has seen level of service analysis, however ten years ago, they were all rated F. The delays were significant. Phil Kercher, Traffic Engineering Manager, added that level of service was obviously improved. One of the reasons for the roundabout was because northbound traffic on Hayden would back up from Frank Lloyd Wright through the Northsight intersection and through the signal.

Mr. Basha discussed why the Raintree Drive intersection is so close to Frank Lloyd Wright. The Raintree Drive intersection is approximately three-quarters of a mile south, whereas Thunderbird Road is over one mile south of Frank Lloyd Wright. The Federal Highway Administration essentially prohibited interchanges being closer than one mile. If an interchange was needed closer than one mile, there had to be a design exception report to prove it was necessary. This is old criteria; the new standard is two miles. In this instance, the interchange is located three-quarters of a mile south of another interchange. In 1985, the property was zoned single family large acreage and commercial rezoning was requested. Homeowners resisted this, requesting that the interchange be moved from the planned location at Thunderbird Road 1.2 miles south of the Frank Lloyd Wright interchange. During the zoning hearing, there was discussion on whether the interchange should be relocated. During the City Council meeting, a representative from ADOT was called, who stated emphatically that it was impossible to move the interchange from Thunderbird to Raintree Drive, because it violates Federal Highway Administration regulations. The City Council voted to change the rezoning, because it was logical for the road to be an interchange and there would be a logical separation between residential properties to the south and commercial industrial properties to the north. After the property was rezoned, the developer constructed the street system (did not construct the interchange, as this is ADOT's responsibility). Again, the property owner told ADOT that if they would move the interchange farther north, they would be willing to sell the property necessary for the interchange at a greatly reduced price (to build at Raintree, instead of Thunderbird). ADOT agreed to the change. There is now a traffic signal at the intersection. After the signal was installed the property owner approached Mr. Basha and stated that it was a horrible location for a traffic signal.

Chair asked whether the decision to have the interchange at Raintree instead of Thunderbird has made a material difference in quality of life. Mr. Basha said it does diminish quality of life and travel patterns. There is a Raintree Drive project to widen the road, including conversation of roundabouts. Because of the passage of the sales tax election, this was the number three priority project in terms of improvement of the interchange.

Commissioner commented that it makes more sense to route the heavier traffic flow through commercial areas, rather than residential. Mr. Basha noted that a number of freeway interchanges are in residential communities.

Mr. Basha addressed that Pima Freeway location McDowell to Shea. The original plan was for the freeway to be on Pima Road. A group, Save Our Scottsdale was formed and wanted the freeway to move a quarter to half mile east. Another Scottsdale residential community group began, called Freeway Action Now. Freeway Action Now wanted the freeway on Pima Road. ADOT stated that they had the funding and the design for Pima Road. They had also begun to purchase properties along Pima Road to widen it into a freeway. Eventually the City agreed with Save Our Scottsdale to move the freeway, which was very expensive, as it was located on Tribal land. There was a logistical nightmare, in that the land did not belong to the Salt River Pima-Maricopa Indian Community government, but to members of its community individually.

In response to a Commissioner question, Mr. Basha stated that the lease is for 99 years, however, he is not aware of the terms. Initially the freeway through the Thomas Road interchange was intended to be parallel to Pima Road. A property/business owner did not wish to sell its property to allow the Freeway through its property. This forced ADOT to construct a reverse curve. This resulted in the Thomas Road Interchange being very close to the Pima/Thomas intersection.

In response to a Commissioner question, Mr. Basha agreed that a roundabout at the Pima/Thomas Road Interchange was a great idea.

Mr. Basha stated that freeway construction began in 1993, including a “bridge at nowhere” southeast of the once Pima-Via Linda intersection. ADOT prepared designs for both locations of the freeway until the City made a decision on locations. The bridge at the Pima/90th Street Interchange was constructed and sat without a freeway for two to three years. Another location of freeway interchange was at Via de Ventura, where the road would one day be. Again, it sat for approximately two to three years surrounded by vacant desert. An additional location is at the Arizona Canal Freeway Bridge over the canal with no freeway in place at construction. At the Chaparral intersection near Scottsdale Community College, there was another bridge location awaiting the freeway. In addition, there was a bridge location at Indian School as well as at Thomas/Pima Road.

Rio Verde Drive is currently under construction, being paid for by an adjacent private developer. The developer is paying to dramatically improve Rio Verde Drive and construct two roundabouts on Rio Verde, one at 118th Street and one at 122nd Street. The City is being criticized by the County for not building the roundabouts earlier. As the bridges for the freeway were constructed early and are now heavily used, the same will be true for the roundabouts.

Shea Boulevard is a critical street, connecting two state highways, including SR87 to the east and SR51 to the west. It is also an important commercial corridor. In the late 1990s when the Pima Freeway was being planned, the precursor to the Transportation Commission was presented with some ideas for improving Shea Boulevard. These ideas related to the Pima Freeway, Shea Boulevard Interchange. Pima Freeway goes under Shea Boulevard, which was an intentional decision, but not necessarily the only option. The Transportation Commission suggested that Shea Boulevard be “depressed” as six lanes underground and that local access be provided by surface streets one lane per direction on the north and south sides of the corridor. Everyone on the committee felt it was an absurd idea. Mr. Basha and the developing consultant were the only ones who felt it was a good idea. Thus, the decision was made to not

approach ADOT with the idea. This is now the second most congested freeway segment in Scottsdale at 134 percent of capacity.

Mr. Basha addressed the Greenway area and the area south of Frank Lloyd Wright north of the Airpark. Scottsdale Road is the border between the City of Phoenix and the City of Scottsdale. At the time the streets were being planned in the 1990s, the two cities did not get along well. When planning the area, the City noted that Greenway existed west of 64th Street. They planned a road that would come to the City's border, assuming that there would be a street constructed in Phoenix. Phoenix decided to curve the street and require the developer of the property to have a reverse curve, connecting Greenway to Butherus, the entrance to Scottsdale Airport. Scottsdale was then stuck with a street that did not extend to the west. This resulted in having a number of other streets and the need for four traffic signals where there should only be one.

In terms of the Scottsdale Airport, Mr. Basha noted that at one time, Hayden Road was planned to be a tunnel under the Airport. More recently, 20 years ago, the intent was to build a tunnel east-west for Raintree Drive. This is not the current plan, which is to connect the Scottsdale Thunderbird intersection to the Pima Raintree Interchange. The portion from Scottsdale to Hayden will begin construction within the next six months to a year. The City is considering proposals for a construction manager at risk to construct the segment. The segment from Hayden to Pima is being reviewed for proposed roundabouts in the vicinity. It is hoped that that construction will begin in the next two to three years. In response to a Commissioner question, Mr. Basha agreed that tunneling would be expensive.

In addressing the vicinity of Chaparral Road and Pima Freeway, Mr. Basha noted the freeway interchange with Chaparral and with Indian School Road. The interchange at Chaparral Road is often criticized because it runs through neighborhoods. Many believe Camelback Road would be a better interchange location, as it directly connects to Scottsdale Fashion Square. It notable that Camelback Road is also in the midst of a residential neighborhood. Prior to freeway construction, Chaparral Road existed as one lane per direction except for a two block area. Before the freeway was constructed, there was interest in widening Chaparral Road from one lane to two lanes per direction except for one two-block area. The topic was raised during the 2015 Master Plan and it was quickly decided that all conversation about widening the segment should cease. There was also criticism for having the Chaparral Road interchange, rather than Camelback.

It is notable that in the 1950s, Camelback Road was a residential street that did not intersect with Pima Road. There is still no connection between the two. If the connection were to be made, the Camelback segment would have to be widened from one lane per direction to two lanes per direction for two miles. Navajo Elementary School is immediately adjacent to Camelback Road. The number of homes in the segment is almost exactly the same as on the Chaparral Road segment. The location of Scottsdale Community College lends credence to the belief that the interchange should be on Chaparral Road. Also, ADOT would have resisted an interchange on Camelback, because it violates Federal Highway Administration regulations. It is often argued that traffic on Chaparral Road has increased dramatically since the interchange construction. However, in 1994, before the freeway, it was under 15,000. In 2014 it was still under 15,000. Currently it is at approximately 17,000, which is only a modest increase. In response to a question from Commissioner, the argument against widening Chaparral Road was the existence of homes.

Mr. Basha stated that in 2007, Indian School Road was two lanes per direction between Hayden and Pima. There was discussion at the time regarding widening Indian School Road. Honor Health hired Mr. Basha at the time to suggest to the Transportation Department that Indian School should be six lanes. At the time, he was under contract with the City of Scottsdale, helping them develop the 2008 Transportation Master Plan. He explained to Honor Health that he could not be contracted to work on this particular project. However, he did meet with his predecessors responsible for the decision and he and Phil Kercher suggested it be six lanes. Traffic volume prediction models are used for these decisions. There were seven streets in the area and the question was whether all streets should be considered. Camelback, Osborn and Oak do not connect to Pima Road and their volumes and capacities cannot be considered in making the decision about Indian School Road widening. The direction was given by Mr. Basha's predecessor to include all seven streets. Mr. Basha considered it to be a serious misjudgment. With this direction, it was determined that Indian School Road should be four lanes. The compromise was to construct a number of right turn lanes. 2016 volume data showed that on Indian School Road between Old Town and the Freeway, there are four segments, each ranking in the top 24 most congested.

Commissioner asked about the tradeoff in comparison to volume capacity to livability, citing the fact that the four lanes allow for the inclusion of bike lanes and therefore, increased mobility. Mr. Basha agreed that there are quality of life and multimodal aspects. However, the suggestion with Indian School Road was to provide bicycle facilities, should it be widened to six lanes. Homes would have been purchased to provide the necessary space.

Commissioner referenced Indian School at Old Town to the 101 and asked if there has been a shift in volume for ride share vehicles. Mr. Basha said that the impact of ride share is not yet known. It is believed that car ownership will decline in the next decade. It is not yet determined whether vehicle miles traveled will increase or decrease. Many believe that because of ride share, there will be more cars on the street. Commissioner commented that the possibility of having autonomous vehicles will add yet another dimension to this conversation.

Commissioner asked about a time frame for reconsidering expansion to six lanes. Mr. Basha noted that the City currently has $500 million in projects, which does not include widening Indian School. If a bond election would include the promise of widening Indian School, it would immediately lose significant votes.

6. PERFORMANCE MEASURES FOR TRAFFIC FLOW

Sam Taylor, Traffic Engineering Analyst, stated that performance measures include safety and efficiency. Within those are several different metrics for quantification. Safety includes collision frequency rates and site specification assessments. Efficiency includes traffic volumes, capacity, delays, level of service and travel time. The method of reporting is the Volume and Collision Report, last published in September 2017. The data is pulled from 323 street segments and 202 intersections and includes traffic volume and collisions.

In terms of safety data, the number of collisions are compared to traffic volumes (collisions per million vehicle miles traveled). Collision rates are generally higher on major arterials than smaller roads. The City has nine intersections with two major arterials. There are 42 intersections with a major arterial and minor arterial. Scottsdale and Indian School has a lower frequency of collisions than Hayden and Thomas, but the rate is higher due to volume. For

some locations, the Department performs site specific safety studies, where they create collision diagrams to determine activity at specific locations. The studies help to identify trends.

Commissioner asked what motivates the Department to look at a particular intersection. Mr. Taylor stated that it is usually done for specific projects, such as roadway improvements. For safety performance, it may lead the Department to insert a protected left-turn phase, for example. Mr. Kercher said the typical practice is that following two years after updating the collision and volume manual, staff will look at the top 25 intersections and segments for the most collisions. This will be followed by a safety evaluation. Some studies are as a result of citizen requests.

Mr. Taylor stated that in terms of segment volumes, they collect data to determine an average daily traffic volume for both directions. The segments are then rated based on volume. Volume to capacity ratios are also used (how many vehicles are on a segment compared to how much the segment can handle without becoming congested). Volumes at 0.5 and 1 are near capacity. Volumes are 0.8 are under capacity. Capacity is determined by number of lanes and the classification of the road itself.

In response to a Commissioner question, Mr. Kercher stated that the table is based upon research performed regarding national standards. Many factors influence the actual capacity, such as location, speed limit, access control and spacing of signals. Commissioner observed using average daily volumes mask rush hour issues, using peak travel time would be more appropriate. Commissioner commented that the numbers presented are far too conservative. Mr. Kercher stated that staff can review the methods for the determinations and provided them to Commissioners subsequent to the meeting. Segments and roadways were reviewed for capacity. Commissioner suggested using the traffic management system travel speeds in terms of ranking level of service.

Mr. Taylor explained that intersection volumes are collected for each approach and then totaled for all approaches. Also factored in are average daily traffic volumes, which can be normalized using monthly adjusted factors. Intersections can then be ranked by highest volumes per day. Average daily volumes can also be analyzed according to the approaches. More data depth can be examined in terms of intersection efficiency performance measures by looking at level of service. This is found by determining the average vehicle delay during peak hours. Software is typically used for this type of analysis, as it depends highly on timing plans for each intersection. The highway capacity manual classifies different levels of services. For signalized intersections, level of service goes from A through F. Level A is typically representative of free flow conditions with less than a ten second delay. For Level F, there are forced flows, failure to clear and waiting through cycles. Another performance metric is travel time from one point to another. When making corridor improvements, before and after travel times can be analyzed to determine any potential improvement.

Commissioner asked if there is a chart of Scottsdale street level of service rankings. Mr. Taylor said there is no chart as level of service fluctuates day by day and time period by time period. They can make time-specific calculations.

Commissioner suggested that staff at least begin to develop statistics for five streets in order to provide a basic status. Mr. Kercher said the Department used to do a City-wide level of service report 20 years ago. The challenge currently relates to the complexity of the task and the manpower necessary. The traffic management center used to be part of the Transportation

Department. Now that they are in a different department, a high level of coordination would be required to complete the analysis.

Commissioner commented that based on a recent visit to the traffic management center, it seems apparent that they are able to determine average control delay at any particular instant for every single intersection. Mr. Kercher stated his understanding that they have the data in their system, but are not extracting it. They are also not collecting travel speed data. Mr. Taylor stated that the ITS engineer is working on acquiring adaptive traffic signal performance measure software, which will help to identify problems at any of the 130 intersections, however the software has not yet been purchased. Mr. Kercher commented that one of the issues with such a purchase is that it requires the Department to provide access of the traffic control system to the software company. There are issues in terms of giving this data away. He suggested having the ITS engineer present this topic at an upcoming meeting.

In response to a Commissioner question, Mr. Taylor stated that the annual average daily traffic volume is the average for the year of how many vehicles are using the segment for both directions during an average 24-hour period. Commissioner commented that average daily traffic volume has no relation to what happens on a weekday versus a weekend. Determining the ratio should be done on a peak hour.

7. OTHER TRANSPORTATION PROJECTS AND PROGRAM STATUS

There were no comments.

8. PUBLIC COMMENT

There were no comments.

9. COMMISSION IDENTIFICATION OF FUTURE AGENDA ITEMS

Commissioner requested that a member from the traffic management center come and speak with the Commission at an upcoming meeting. Mr. Kercher noted that the Department is starting a new study to look at improving signal timing and travel time. It may be helpful to combine the two presentations.

Chair requested three tentative items: Bus partnerships at the City level, bridges across the city and aftermaths of the sales tax election.

12. ANNOUNCEMENTS

There were no announcements.

13. ADJOURNMENT

With no further business to discuss, the meeting adjourned at 8:06 p.m.

AYES: Chair Graham, Commissioners Ertel, Anderson, Ertel, Higgs, Kuzel and Lall.
NAYS: None

SUBMITTED BY:

eScribers, LLC

***Note: These are summary action meeting minutes only. A complete copy of the audio/video recording is available at http://www.scottsdaleaz.gov/boards/transp.asp**